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Request For Information (RFI) designated NNH15ZDA012L

Topic addressed

PDS integrated with the Minor Planets Center (MPC), the Astromaterials Acquisition and Curation Office (AACO), and Astrogeology Science Center (ASC)

Rational

As a planetary scientist, data user, and GIS/Database professional the access and functionality of the PDS structure and integration with satellite repositories MPC, AACO, and ASC, which are currently independent entities, is key for easy retrieval of data, tools and other resources related to same planetary body such as tutorial or reference material that help in the analysis of the data and the research conducted with them.

PDS is a repository of data for many missions and also serve as open repository of results, tools, workflows and tutorial from data analysis programs, thus PDS would benefit from the integration of the MPC, AACO, and ASC repository for a more far reaching sharing and cross disciplinary infrastructure for the planetary science community.

Suggested improvements or changes

The PDS and its potential integration with the MPC, AACO, and ASC through potential link by reference body and related missions could help in making PDS more responsive to cross disciplinary research in planetary science.

An integrated structure could provide a more effective PDS architecture that would facilitate research activities on archived data and future data products and resources through common data standards and data sharing links and procedures. The proposed integration is seen as a continuous and ongoing process in which the PDS, MPC, AACO, and ASC management have key supporting role for the planetary science community.

Impact of not making the suggested improvements or changes

The non-integration of the PDS with the MPC, AACO, and ASC archive structure and resources would create redundancy of procedures for data curation and sharing which will likely not follow the same standards, thus creating redundancy and confusion in the archiving and data sharing processes.

Impact of the suggested improvements or changes

The integration of the PDS with the MPC, AACO, and ASC archive structure and resources would create ground for standard procedures for data archiving, curation, and sharing that would be of vital support for the planetary science community.

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Topic addressed

PDS repository of results, tools, resources, workflows, and tutorials from NASA's funded research through Data Analysis Programs.

Rational

As a planetary scientist, data user, and GIS/Database professional the access and functionality of the PDS structure is key for easy retrieval of data, tools and other resources such as tutorial or reference material that help in the analysis of the data and the research conducted with them.

PDS is a repository of data for many missions and vital open repository of results from NASA's funded research through Data Analysis Programs. However, often results posted are hard to understand and use due to lack of repeatability of the results because for instance tools or codes/scripts/models used for their production are not of public domain, not archived in PDS. This significantly limits the usability of the results itself.

Suggested improvements or changes

PDS requirements of data and intermediate products from various missions have been improved, however, requirements for the Data Analysis Programs are lagging behind. A more systematic practice in data/results sharing, tools, resources, workflows, and tutorials would greatly benefit data and results sharing in the planetary science community.

Often in Data Analysis proposals the data management component is left behind, not considered as integral part of a proposal whose purpose is to advance the use of mission data to facilitate the dissemination of new results, beyond the relevant missions' team releases. In order to promote work that would provide better return from Data Analysis Programs, a minimum requirement of data management/archival should be set as mandatory so that results, metadata, workflows/models, and tools/codes/scripts can be gathered under PDS and be of support for the planetary science community at large.

The PDS should play a pivotal role in providing predefined structures in which intermediate products/results, metadata, workflows/models, tools/codes/scripts, and tutorials should be deposited. This would be a first step to facilitate the archiving process and reduce costs for both data providers and the PDS.

Impact of not making the suggested improvements or changes

Systematic reduced research return into PDS and the planetary science community in sharing results, tools/codes/scripts, resources, workflows/models, and possible tutorials from NASA's funded Data Analysis Programs.

Impact of the suggested improvements or changes

Effective and value added return of NASA's funded research through Data Analysis Programs for research continuity through PDS by sharing of results, tools/codes/scripts, resources, workflows/models, and possible tutorials useful to the planetary science community.